



biosys

 **Jumpstart**
solutions

'Modern man does not experience himself as part of nature but as an outside force, destined to dominate and conquer it.

He even talks of a battle with nature, forgetting that if he ever won the battle he would find himself on the losing side.'

E.F. Schumacher, Economist

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16.30 hours Pacific Standard Time, 27.12.2007
from our South American Office

We are attempting to confirm rumours that pictures from GIS satellites have revealed that a major disaster has occurred at the remote Biosphere4 research centre high in the Andes, which was due to open as an exclusive holiday resort, provisionally called Club Eden, some time next year. It appears that a fire has destroyed a section of the site, although the extent of the damage will not be known for several days. The centre can only be reached by helicopter, and at present conditions are too bad in that part of the Andes to allow rescue workers in. With El Nino still raging, it is likely to be several weeks before a full scale investigation can be organised.

The complex, the biggest and most intricate closed environment system ever built, was financed by SUBTECH and designed by Professor Alan Russell, the legendary ecological campaigner, spokesman and researcher. Relations between Russell and SUBTECH have often been strained, and he was known to have opposed the commercialisation of the centre.

Russell was believed to have made major advances in his attempts to engineer a bio-synthetic hybrid plant capable of increasing the amount of carbon dioxide stored in the biomass relative to the atmosphere and thereby diminishing the impact global warming is having on all our lives. It is unknown whether Russell's valuable work has been damaged by the fire.



Sam Devlin, the controversial geneticist and head of the Club Eden project for SUBTECH, is known to have fallen out with Russell over the change in emphasis from research to resort at Biosphere4. Devlin, who has had a career every bit as colourful as that of Russell, including the famous vegetarian crocodile cloning controversy of 1999, has been unavailable for comment.

A spokesman for SUBTECH has sent us the following statement: "It appears that there may have been a small problem at our Biosphere4 research and recreation centre. Initial inquiries have been hampered by poor weather. Casualties are unknown, as is the cause of the problem. We have not had any contact with Professor Russell for many months now, even though he has been living in the complex. We expect that whatever teething problems the site may be experiencing, it will still be ready in time for next years opening to the public. Club Eden will be a unique vacation experience, with guaranteed good weather and clean air. Professor Russell was a brilliant scientist, but his increasingly aggressive attitude towards our attempts to make the site financially successful will lead to his removal from the complex by the end of June 2009, when his contract expires."

END OF REPORT

SETUP

To get the game up and running, quit any applications you may have running, insert the **Setup Disk** and follow the on-screen instructions. We strongly recommend that you choose the Normal installation option if you have room on your hard drive. Once installation is complete, you will be asked to put in the **Data Disk**. Wait a moment for your computer to recognise the disk then, to launch the game, go to the *Start* menu, select the *Programs* sub-menu, the *Biosys* sub-menu, then *Biosys*. You may choose to consult the Installation section of this manual for more detailed information.

Watch the opening movie if you want clues as to your situation, then press any key for a new game...

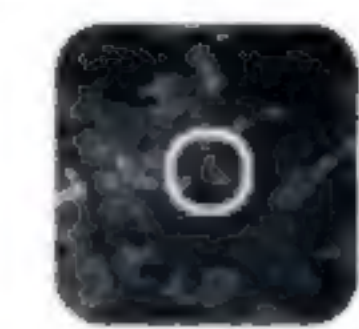
(Note - We suggest that you adjust the brightness of your monitor to a middling setting; you will know that it is set too bright if in-game movies have nasty 'edges'.)

PLAYING THE GAME

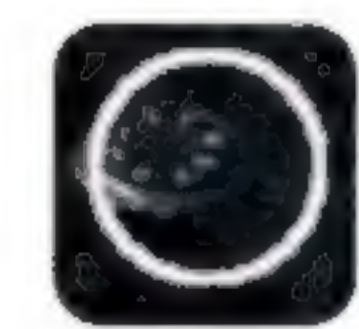
You wake up sprawled in the mud. Torrential, tropical rain beats down - the ground is sodden. Your clothes stink of smoke and you feel disturbed; you have no clear sense of where or who you are. You have dim recollections of choking screams, of running through a tunnel to escape flames - **you can recall having sealed it behind you using some kind of infra-red device** - but you don't seem to have this with you anymore...

Move the cursor around the screen with the mouse - you may find plants, objects or machines that you can interact with.

CURSORS



look around



object or feature



plant



pickable fruit, flower, bark or tuber



short journey



long journey



blocked path

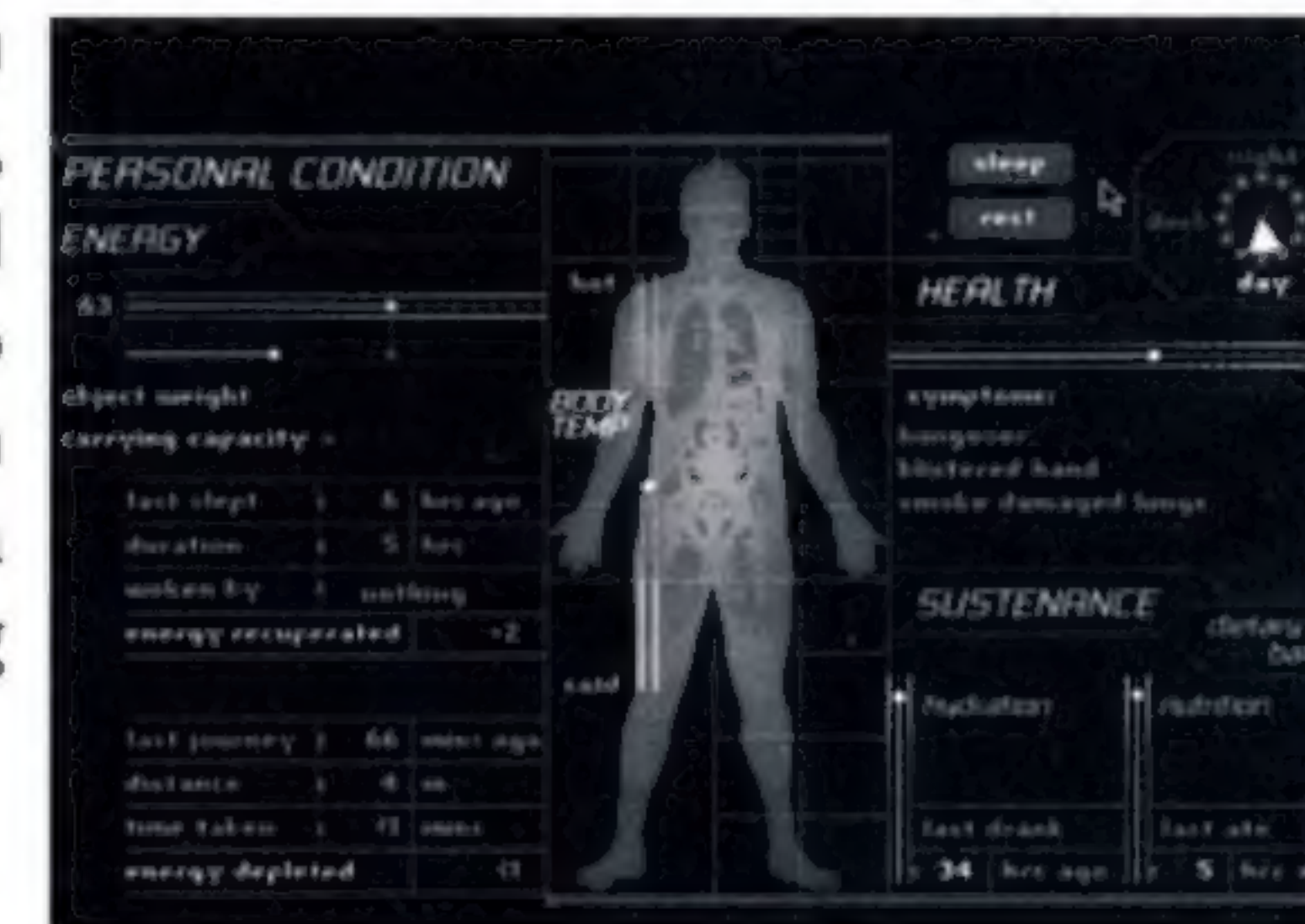


go down

Left-click with the mouse to to have a closer look at a plant or machine, to pick something up, or to activate a feature. Right-click to come back to the main site from a close-up.

Checking the flashing sensor device nearby will confirm that the soil is heavily waterlogged - **the way you came has been blocked by the flooding...** to get back that way, you would need to allow the ground to dry out somehow.

Your mouth is parched from the fumes; **you need a drink urgently...** hold down 'Tab' to check your personal status screen. Here you can see exactly what sort of condition you are in: Whether you need a drink or food, whether you have any particular symptoms, and what your overall level of health is. You can also go to sleep here by clicking on the 'sleep' button, or take a quick breather by clicking on 'rest'.



(when the 'plant' cursor shows) will tell you what state of health it is in. (The information in the top left-hand corner is the important bit.)

You recollect that some plants, epiphytes growing on the boughs of the bigger trees, collect rain water. Holding down 'Caps Lock' will give you an indication of the general condition of your surroundings. Pressing it when you are looking at a particular plant

FRUIT AND OBJECTS

Looking around, you may discover fruit (or other useful parts of plants such as nuts, tubers, flowers or bark) that you can pick, or objects that you can pick up by left-clicking on them. Once you have picked up an object, press 'S' to stash it, 'D' to drop it, or 'Space' to use it. (Note, though, that some objects such as the compass work automatically, and don't need you to press 'Space'.) Fruit and other plant materials go straight to the bottom status bar, rather than being held out in front of you. Be warned that dropped organic material is considered discarded, quickly rots away and cannot be picked up again.



If you stash an object it will be stored in your bottom status bar. You can access this by pressing 'Shift', and then sliding left and right with the mouse to select an object; the top status bar will identify it for you. Left-click to take it out - or, in the case of fruit, to eat it. You can drop or use items directly from the bottom status bar by selecting them with the mouse and pressing 'D' for drop or 'Space' to use. Your energy level determines the amount you can carry.

WHAT NOW?

Take some time to explore; find yourself some food and water; locate the compass and use it to get your bearings. Your first priority is survival; **you will need to gain control over the technosphere equipment that sustains the biomes, because you are in turn dependent on the environments for food, medicine and oxygen.** If the plants, birds and insects die, you will surely follow.

After that? Find out who you are and try to uncover the mystery of your situation. **Take note of areas you can't yet get into.** Be aware that 'puzzles' in Biosys tend to be tied logically into either the environmental or player simulation; for example, if you're not strong enough to lift something, find a way to boost your strength.

Don't be intimidated by the amount of information you are presented with - plants essentially just need warmth, humidity and water to stay happy. One final clue for you: If some of the plants seem to be getting a little aggressive, remember that they like Carbon Dioxide (CO₂), which people breath out, but not oxygen (O₂). In addition, be aware that plants photosynthesise during the day to build up energy, and respire at night....

By now you may well be asking, "What sort of game is this, anyway?". Biosys is a survival mystery; it represents an original synthesis of the Adventure and Sim game genres, and differs from most other first-person Adventures in that both the environments and you, the player, are dynamically simulated. It gets dark and cold at night, plants grow fruit and die, the tide goes in and out. External weather patterns change. The rhythms of this simulation will determine the way individual plants and environments will appear to you. The same place can exist in wet, dry or dead states; whether

a watermelon vine has fruit or a bird's nest has eggs depends on how you are managing to look after your little world. As the player, you can achieve god-like control of the microcosmic world you find yourself in, but you will remain a vulnerable creature within it.



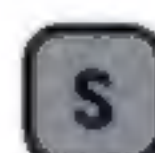
Biosys was made with the co-operation of the inhabitants of the real Biosphere2 in Arizona. It is for you to determine where fact ends and fiction begins

LEFT CLICK
(depending on what you are looking at:)
take a closer look
make a journey
pick up an object
pick fruit
apply an object



RIGHT CLICK
Return to main site from a close-up

<S> Stash an object



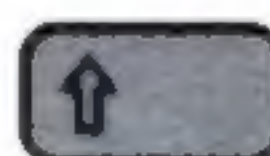
<D> Drop an object



<SPACE> use an object/ eat fruit



<SHIFT> access stashed objects and fruit



<TAB> check your personal condition



<CAPS LOCK> check the condition of a plant
or your local surroundings



<CTRL> move the cursor freely around the screen



<ESC> main game menu screen



<F1> toggle help cues



<F5> save game



<F6> load game



<F7> screen grab



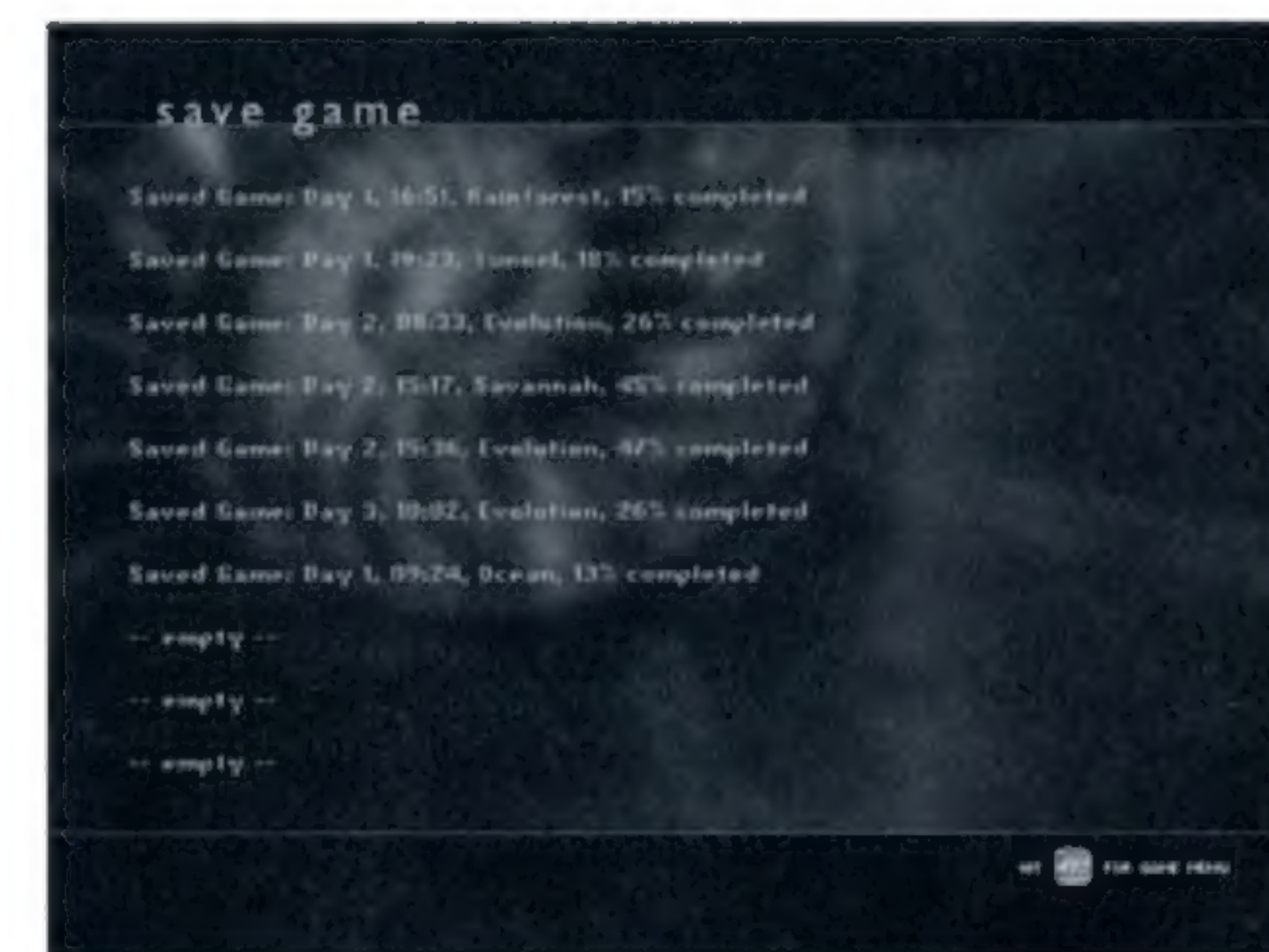
Main Menu

Pressing <escape> at any point during play pauses *Biosys* and returns you to the Main Menu Screen. From here you can start a new game, save or load games, quit, or check the controls or credits.



Load and Save Game Screens

These can be accessed from the Main Menu Screen, and allow you to save your progress in *Biosys*; you may use F5 and F6 as quick save and load shortcuts while playing the game. Saved games indicate the day, time, and location where you saved and also a percentage completed score. This is based on 'milestone' events and achievements, (heralded in-game by a distinctive panpipe sound) and the proportion of all game locations you have explored.



PERSONAL STATUS SCREEN

Press <Tab> to get this overview of your physical condition:

Energy is a measure of your physical strength, overall get-up-and-go and/ or tiredness. It determines your ability to make journeys, and to heft objects; your carrying capacity is equivalent to your Energy. The total weight of the objects you are carrying cannot exceed this, or you will be too weighed down to move. Note that walking around laden down like a pack mule will deplete your Energy faster than if you travel light. You may regain Energy by sleeping or resting; certain plants, drinks and other stimulants may offer a temporary boost; some may even confer superhuman strength for a while, but are likely to affect Health adversely if abused.

You can sleep for longer indoors, especially in beds, bunks or hammocks that you might find. The longer you sleep, the more Energy you will get back; you also gain more energy per hour of sleep if you get your head down somewhere comfortable - A certain item of survival kit will allow you to sleep for longer out in the rough; but you can be woken by rain, cold, heat or your own coughing. Use sleeping pills to sleep longer if necessary, but be careful of their barbituate content.

Journey information; see how far you've travelled and how long it took. Note that longer journeys across rough terrain or through jungle may deplete energy significantly, especially when laden down with heavy objects.

PERSONAL CONDITION

ENERGY

63

object weight

carrying capacity

last slept	:	6	hrs ago
duration	:	5	hrs
woken by	:	nothing	
energy recuperated	:	+2	

last journey	:	66	mins ago
distance	:	4	m
time taken	:	<1	mins
energy depleted	:	<1	

hot

BODY TEMP

cold

If you're shivering or sweating, check your body temperature. Hot drinks and survival garments can keep you warm in freezing situations; running around can also help, so don't stay still for too long. It's very important to drink water to keep cool in the arid desert and savannah regions. Be aware that it's possible to die from exposure or heatstroke.

sleep

rest

HEALTH

63

symptoms:

hangover

blistered hand

smoke damaged lungs

SUSTENANCE

hydration

nutrition

last drank

34 hrs ago

last ate

5 hrs ago

night

dusk

day

dawn

Click on the Sleep button when you're very tired; you will sleep for a period determined by your current level of energy and your situation; ie.. you won't sleep for long if you're not tired, you're outdoors, it's cold and it's raining. You will have trouble getting to sleep if you have taken stimulants; be aware that elements of your past buried in your subconscious may struggle to the surface in dreams...

Click on the Rest button to take an hour's breather; it's a useful way to get a quick boost, but you won't actually sleep or regain as much energy as if you had slept, and it's no substitute for real sleep; you will eventually pass out if you try to rely on the Rest button alone.

Your 'body clock' gives you a general sense of the time of day; but you will need the alarm clock or biO/Sys4 for a precise time reading.

Health is the most important parameter in the game for you. If this reaches zero, you are dead. Your health level is affected by almost everything: Thirst, hunger, disease, pollution, drug abuse, toxins, bad diet and injury. It also sets the upper limit on your Energy, unless you choose to use stimulants as an artificial means of overcoming this deficit...

Symptoms help to identify what is depleting your Health, or making you groan, cough or wheeze; use them to work out what you can do about any ailments, and try to find things (whether natural or pharmaceutical) to deal with them. Tackle your hangovers in the traditional way...

Hydration is very important; the human body ideally requires three litres of water per day, from foods and as liquid. Find a way of carrying water round with you, and make use of plants and fruit that carry liquid where possible. Thirst can be your greatest enemy, particularly in the hotter, drier regions - extreme thirst may even cause hallucinations; one warning, though; still water can attract microscopic life - be careful where you drink from...

You need to eat, obviously - be aware that low nutrition will not only affect your health, but also weaken you, causing your energy to drop; but don't gorge yourself - try to take food only when you need it; it may take some time to grow back...

Dietary balance is not crucial to survival, but if you want to keep your health up, try to mix your diet - hunt or fish for protein as well as eating fruit, vegetables and nuts. You may use vitamin pills as a dietary supplement if you have problems finding enough natural foods. Tinned rations are intended for emergency use only - as a person of advanced years, depend on them exclusively and you may well risk a coronary...

PLANT AND ENVIRONMENT STATUS SCREEN

Pressing <Caps Lock> at any time will bring up a general description of your environment on the right-hand side of the screen. Pressing it while looking at an active species (when the 'plant' cursor is showing) will also display information about the condition of that plant on the left-hand side of the screen.

The colloquial name for the plant you are looking at.

A brief examination of the plant shows up the symptoms of any particular ailment, and gives an impression of its overall Health, the most important parameter on this display. Health puts an upper limit on a plant's ability to photosynthesise and produce the oxygen you need to breathe.

Checking buds and stalks lets you know if this plant has berries, tubers, nuts, bark, flowers or other pickable parts growing or present. A plant will only produce fruits if it is reasonably healthy.

This part of the display is for specialists only, representing as it does detailed information about the way the plant is processing water, sunlight and gases (Carbon Dioxide into Oxygen) as it photosynthesises.


Leaf temperature is largely dependent on sunlight and the ambient temperature; a plant's rate of photosynthesis will slow down if it is too cold, but there is also a maximum temperature above which the leaves will start to 'bake' and oxygen production will drop off rapidly.


Water uptake refers to water being drawn up into the plant from the soil through its roots. Transpiration is water being lost through 'pores', or stomata, in the leaves. Though not a deliberate reaction to temperature, transpiration has the same cooling effect on a plant that sweating does in humans and animals. A plant will not be able to transpire if there is insufficient water available for it to take up through its roots, and will close its stomata; it will not then be able to photosynthesise at the same rate, as much less gas can go through it.

Plant side:


SPECIES
orange


CONDITION **unhappy**


has fruit



LEAF TEMPERATURE

too cold

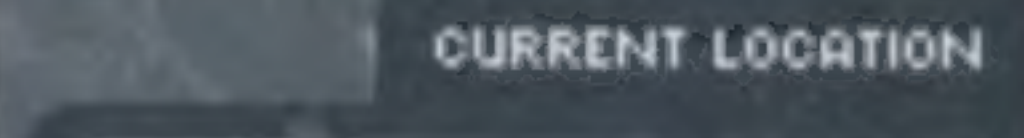
LAST WATERED DAY(S) AGO
WATER UPTAKE

TRANSPIRATION

cooling plant

 CURRENT RATE OF PHOTOSYNTHESIS

Environment side:

BIOME HEALTH 

Rainforest 53%

CURRENT LOCATION

cold damp calm clean very dry air

Years of green-fingered experience have lent you a horticultural sixth sense; just by the taste of the air and the 'feel' of the vegetation around you, you are able to derive a rough impression of the overall health of a biome.

Check nearby foliage to determine the botanical condition of your locale.

Take a deep breath to determine the precise state of the atmosphere around you.

MENU AND STATUS SCREENS

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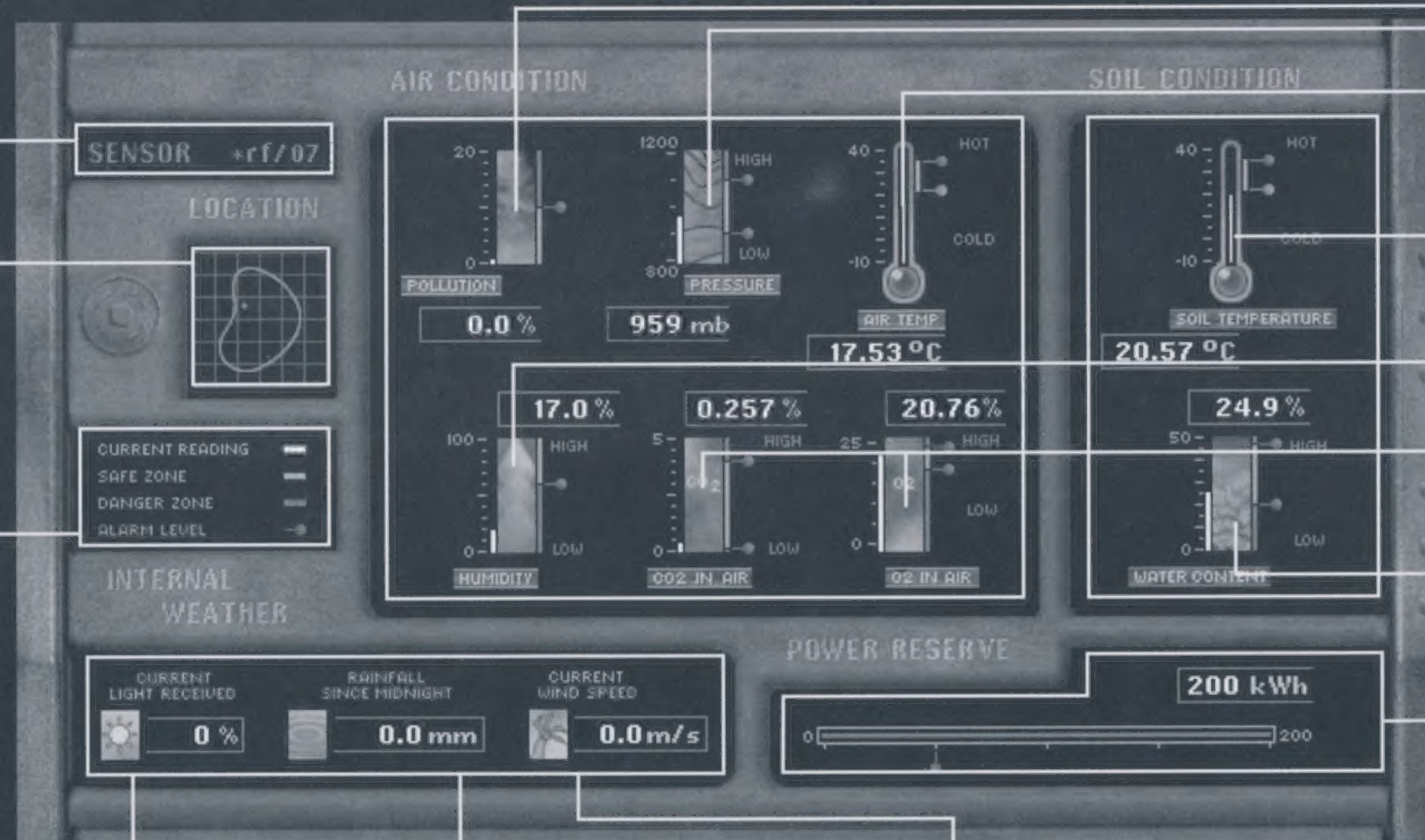
SENSOR PROBE SCREENS

Sensor Probes fitted with scientific instruments that monitor information about the condition of the soil and air are distributed throughout the biomes. They offer you local information about the condition of your immediate surroundings. You can access a Sensor Probe's information screen by pressing the 'open' button to slide back its protective weather cover. If anything is significantly wrong, a red light on the probe will flash. If there is an emergency condition such as smoke pollution, a warning klaxon will sound repeatedly.

The identity marking; here 'rf/07' denotes a Sensor Probe at Rainforest site demarcation 07.

The location map identifies a probe's position within the biome; it can be helpful for your own navigation and reference if you are without a map or compass.

The key tells you that white bars show the current level for a given parameter, with red and green sections indicating dangerous and safe levels, emphasised by the alarm level marking.



There is no internal lighting in Biosphere4; you are dependent on the Ecuadorian sunshine for the healthy oxygen production of your plants. Obviously, there is more sunlight at midday, but external cloud cover varies and you may notice that some days are more gloomy and overcast than others.

Rainfall (from the Rain Machines) since midnight is measured in millimetres. Make sure to avoid waterlogging.

Current windspeed is measured in metres per second and is determined by whether or not the Circulatory Fans (wind machines) are on. Wind evens out atmospheric conditions in a biome, and though it can slightly accelerate photosynthesis if other conditions are right, it may also dry plants out if there is not enough water in the soil.

The dangerous effects of fumes, smoke and other pollutants are magnified in a hermetically sealed, closed-life system. The Soil Bed Fans can be used to suck polluted air through porous earth, which acts as a natural filtration system. The Circulatory Fans, or wind machines, disperse and distribute polluted air but do not clean it.

Air pressure is not a crucial parameter for you to worry about; it increases when the biomes are hot. Pumping air out of a biome and into its Air Tank will reduce ambient pressure, but if pressure drops too low you will be unable to draw any more out.

Air temperature is determined by the Heaters and the temperature outside the Biosphere. Soil Bed Fans can be used to cool things down if some plants are finding it too hot, and the rain machines also have a slight effect on temperature. Some plants are more sensitive to cold than others, and may keel over easily if chilled.

Soil temperature requires more energy to alter, and thus shifts more slowly than air temperature. Both are important for plant health, but the more extreme fluctuations of air temperature mean that it is the one to watch.

Humidity is the relative moisture content of the air. It depends on the amount of water in the soil and the rate at which plants are photosynthesising; they will transfer more water into the atmosphere when working hard. You can affect humidity with the Misters and, to a much lesser extent, the Rain Machines.

Plants use Carbon Dioxide (CO2), exhaled by animals and microbes, along with sunshine and water to photosynthesise, and produce Oxygen (O2) for those same creatures, and yourself, to breath back in. Healthy plants will mean a high or stable O2 level in the Biosphere, which will save you from altitude sickness and asphyxiation.

Plants in different regions have varied requirements for soil water content. Use clean water with the Rain Machines to keep them happy, and make sure that your Drainage Sumps aren't allowed to clog. Note that the Savannah can be brought into bloom by a period of very hot, wet weather.

The Power Reserve is your basic resource for running the Heaters, Rain Machines and all other technosphere machinery. It is charged up by the Wind Farm and Solar Furnace outside Biosphere4, and the power level will thus fluctuate with external weather variations.

SUPPORTED SYSTEMS

Biosys will only run on PCs that use the Windows 95 operating system or later, such as Windows 98. Biosys is not supported on PCs that use the Windows NT operating system.

Biosys uses the DirectX system from Microsoft, which must be installed on your machine before running the game. Biosys comes with the DirectX version 5 system; please ensure that this version (or later) is installed on your PC before running Biosys. If you are unsure about your DirectX installation, install DirectX 5 from the Biosys "Setup" CD-ROM; this will update your system to DirectX 5 if necessary, but will not overwrite a later version of DirectX.

The minimum required system for playing Biosys is:-

- Pentium 100 MHz
- 16Mb RAM
- x4 speed CD-ROM
- 640 x 480 display (at 256 colours)
- 16-bit soundcard
- 123 Mb free hard disc space

The recommended system is:-

- Pentium 200 MHz
- 32Mb RAM
- x8 speed CD-ROM
- 640 x 480 display (at 256 colours)
- 16-bit soundcard
- 375 Mb free hard disc space (or better).

Before installing the game, please ensure that your PC conforms at least to the minimum machine specification; technical support is not available for machines with a lower specification.

INSTALLATION

Biosys is supplied on two CD-ROMs. The "Setup" CD-ROM is required when installing the game. The "Data" (or "Program") CD-ROM is required when playing the game. To install Biosys, first ensure that your system conforms to (at least) the minimum specification (see above), then insert the "Setup" CD-ROM into the CD-ROM drive, open the CD-ROM (to see its contents) and double-click on the icon of the SETUP.EXE program. Follow the on-screen instructions in order to perform the installation.

The Setup program offers a choice of three different types of installation:- Minimum, Normal and Full. The only difference between each type is the amount of hard disc space that is used for Biosys's data files. The more hard disc space that can be used for Biosys, the faster the game will run. The Normal installation type is recommended for most users. Choose the Minimum type if hard disc space is scarce. Choose the Full type for the optimum game play experience, if you have enough free hard disc space.

To change the installation type at a later time, first un-install Biosys (see below) and then re-install it using the new type. You should be able to do this and still preserve your saved game files by ensuring that you do not manually delete any files after uninstalling, and by using the exact same directory for the program when re-installing.

Having installed Biosys, please ensure that DirectX 5 (or later) is installed on your system. DirectX 5 can be installed by running Dx5eng.exe in the DirectX folder on the Setup disk.

It is recommended that you restart your system after having completed the installation (this is mandatory if you had to install DirectX).

[If your machine is running Windows 98, it may not be necessary to install the version of DirectX that comes supplied with Biosys. However, it is difficult to tell at the time of this writing because Windows 98 is some months away from being released. If in doubt, run the game without manually installing DirectX; then install it if the game reports that it cannot connect to DirectX. For further details, see the 'FAQ and Troubleshooting' section below.]

LAUNCHING THE GAME

Remove the "Setup" CD-ROM; it is no longer required except if you have to re-install DirectX or Biosys at a later time. Insert the "Data" (or "Program") CD-ROM. This CD-ROM is required to be in the CD-ROM drive at all times while playing the game. Insert the CD-ROM before starting the Biosys program, and remove it only after exiting Biosys. Do not attempt to remove this CD-ROM while playing Biosys. (Note that this CD-ROM is required to be in the drive even if you have performed a Full installation.)

Close all other programs that may be running. This is especially important on machines that have only 16Mb RAM.

Run the Biosys program by selecting:-

Start -> Programs -> Biosys* -> Biosys

(* substitute the group name chosen when installing).

If the drive letter (D, E, F...) of the CD-ROM device has changed since installation (or since last running the game), you will be prompted to select the new drive letter of the device. If the "Data" CD-ROM is not inserted, you will not be able to correctly specify the CD-ROM drive letter.

UN-INSTALLATION

To uninstall Biosys from your system, select the Uninstall option from the Biosys program group menu (if this option is present), i.e.

Start -> Programs -> Biosys* -> Uninstall Biosys

(* substitute the group name chosen when installing).

If an Uninstall option is not present as a menu item, Biosys can be uninstalled by running the Add/Remove Programs control panel, i.e.

Start -> Settings -> Control Panel -> Add/Remove Programs
selecting "Biosys" and then clicking on the Add/Remove... button.

When uninstalling, any data files that were generated by Biosys when running the game (e.g. saved game files) will not be removed. These files must be removed manually. (You can preserve these files if you plan to re-install Biosys later.)

Please note that uninstalling Biosys will not uninstall the DirectX drivers. Once installed, DirectX likes to stay on your system.

IF BIOSYS RUNS TOO SLOWLY

The more data files that are accessed from the hard disc, as opposed to the CD-ROM, the faster Biosys will run. Consider uninstalling Biosys and re-installing it at a higher installation type.

Ideally Biosys will be run on systems with 32Mb RAM or greater. If you have only 16Mb, consider upgrading to 32Mb - this is a more important upgrade for Biosys than upgrading your processor.

Please note that Biosys does not take advantage of dedicated 3D graphics cards. However, a fast 2D video card will help you get the best performance out of Biosys.

FREQUENTLY ASKED QUESTIONS AND TROUBLESHOOTING**1. How do I obtain Technical Support ?**

- Please see the section below for obtaining technical support. However, first please review this 'FAQ and Troubleshooting' section to see if it helps solve the problem. If you have Internet access, please see the Biosys web site for possible patches, upgrades and information that may also help.

2. The game does not seem to work properly under the Windows 98 operating system.

- Biosys has been developed and tested under Windows 95 only. At the time of this writing, Windows 98 has not been released by Microsoft. If you suspect that Biosys is not running properly under Windows 98 and that the problem(s) are not solved by any other points in this Troubleshooting section, please contact Technical Support or access the Biosys web site for possible patches, upgrades or information that may sort out the problem.

3. Should I install the version of DirectX that comes with Biosys if I am running Windows 98 ?

- At the time of this writing Windows 98 is some months away from being released, so it is difficult to tell what its final configuration will be. It is recommended to install the Biosys game but not DirectX (under Windows 98). If the game reports that it cannot find DirectX, then DirectX should be manually installed. Please see Microsoft information sources for further details of installing DirectX under Windows 98.

4. When I run Biosys I get a dialog box asking me to insert the Program CD-ROM and to select a drive letter. I can't get past this dialog box.

- Press Exit on the dialog box. Open the "My Computer" window by double-clicking on its icon on the desktop (please note that you may have changed the name of this window to something different). In "My Computer", look for the icon that represents the CD-ROM drive. Note the drive letter of the CD-ROM drive (usually D, or E, or F, etc.); also check that the icon reports that the Biosys data disc is inserted. If the disc is not present, insert it into the CD-ROM drive. Please ensure that the surface of the disc is clean, dust-free and unscratched. Run Biosys again. At the dialog box, allow the CD-ROM to finish "spinning up", then select (click on) the drive letter previously noted, then click on "OK".

5. I still can't get past the dialog box! <from above>

- Ensure that the correct disc is in the drive. The "Setup" CD-ROM should not be in the drive when starting the program; this disc is only used for installation. Assuming you

have the correct disc, try to open it (to look at its contents) by double-clicking on the CD-ROM drive icon in the "My Computer" window. If you cannot open it, this indicates that there is a problem with the drive or with the disc. Can the drive read other discs ? Is the disc really clean ? Are there multiple CD-ROM drives on your machine, and if so are you looking at the right one ? If there is still a problem after checking all these things, the installation of Biosys may have become corrupted. In this case, please try uninstalling and then re-installing Biosys.

6. The machine hangs when I run Biosys. It seems to be happening just as the program changes the screen mode.

- This is a rarely found problem with DirectX and/or your machine's display driver. Consider re-installing DirectX, or upgrading DirectX by installing a more recent version (if available). Also consider contacting the maker of your video card for an updated driver; most video card manufacturers make available the latest drivers on their web sites. The problem may be related to changing from your desktop's high resolution screen mode (e.g. 1024 x 768, at 24 bits-per-pixel) to the screen mode used by Biosys (640 x 480, at 8 bits-per-pixel). If the latest versions of DirectX and/or the display driver do not fix the problem, consider changing the screen mode of your desktop before running Biosys (use the Display control panel to change the screen mode).

7. After installing DirectX, my display and/or sound is not behaving as well as before.

- You can restore the previous Audio and Display drivers from the DirectX Setup program, which can be accessed by doing:-

Start -> Settings -> Control Panel -> Add/Remove Programs

selecting the "DirectX Drivers" item, and then clicking on the Add/Remove... button.

8. Biosys seems to be accessing all its files from the CD-ROM, but I have done a Medium / Full installation. Why can it not find its data files on the hard disc ?

- The SETUP program loads various data files used by Biosys to the Biosys install directory (i.e. the directory in which the Biosys.exe program file lives). If you change the names of these files (or of the sub-directories in which they live), or if you change the directory locations of the files, Biosys will not be able to find these files on the hard disc.

9. I haven't changed a thing! <from above>

- The Biosys program looks for its files (and the sub-directories in which they live) in what is called its Current Working Directory (or CWD). The SETUP program sets things up so that the CWD is set to be the install directory so that everything will work

fine. However, it is possible that you may have changed the CWD for the program. If you access the program via a shortcut, right-click on the shortcut icon and then select the 'Properties' menu item. In the Properties dialog box, click on the 'Shortcut' tab. The 'Start in:' edit field specifies the CWD for the program. Ensure that the contents of this edit field are set correctly (i.e. the edit field should specify the name of the install directory, assuming that you have not moved the data files after installation).

10. In the Load Game menu screen, Biosys does not list my previously saved games.

- Biosys saves and loads games to/from its Current Working Directory (or CWD). See the point immediately above regarding ensuring that the CWD is correctly set for the program.

11. I cannot find my screen-grabbed images.

- They are saved to the program's Current Working Directory (or CWD). See the two points immediately above.

12. Biosys reports errors when I exit. What should I do ?

- Please note down the errors. (While an error message box is being displayed, the program is still running and cannot be restarted. Dismiss all the error message boxes in order to be able to run Biosys again.) If an error message requests that you re-install DirectX or free up more memory or perform some other similar task, please do so before running the program again. If an error message is more cryptic, and something untoward happened when playing the game, please contact Technical Support with the details.

13. Saving a game doesn't seem to work.

- Please ensure that you have enough free disc space on the drive on which Biosys is installed.

14. I want to be able to backup my saved games.

- They are stored as .sav files in the program's Current Working Directory (or CWD). The CWD is set by the SETUP program to be install directory (the place where the Biosys.exe file lives). In case you cannot find the .sav files there, please see points 9, 10 and 11 above.

15. Loading a saved game doesn't work.

- Please contact Technical Support.

16. When I leave the computer for a while and Biosys is running (and fully displayed on the screen), the screen saver and/or monitor low power mode cuts in. After restoring Biosys, the program does not behave properly.

- You have an old version of DirectX installed. Please close down Biosys and all other programs, install the latest version of DirectX, re-start the machine and then re-run Biosys.

17. I accidentally deleted the Biosys folder on the hard disc, and now I cannot properly uninstall it.

- Re-install Biosys to the same folder; then uninstall it.

18. I want to re-install Biosys, but I want to preserve my saved game files.

- Note down the name of the folder/directory that contains the saved game files. Copy (not move) the saved game files to a safe place - e.g. another folder, or a floppy disc. Uninstall Biosys. The Uninstall program will report that some files could not be deleted; do _not_ manually delete these files. Re-install Biosys to the same folder as before. The saved game files should still be there and be loadable. If they were deleted, restore them from the backup location.

19. Can I return to the desktop once in a while without quitting Biosys ?

- Yes. Use the Alt+Tab key combination. It is helpful to leave a folder open on the desktop before launching Biosys so that you have something to Alt+Tab to. When you Alt+Tab away from the program, any playing AVI movies are closed. For the best game play experience, try not to do Alt+Tab when a movie is playing. Remember not to remove the CD-ROM whilst back on the desktop; return to Biosys and exit from it before removing the CD-ROM. Click on the Biosys button on the task bar in order to return to Biosys.

20. How do I exit the menu screens ?

- Hit the Escape (Esc) key until you are back in the game.

21. On certain close-up screens I cannot access my stashed objects or the personal or plant status screens.

- This is intentional, and part of the game.

OBTAINING TECHNICAL SUPPORT

Before contacting Technical Support, please ensure that:-

- your machine meets the minimum requirements for the game
- you have installed Biosys (and optionally DirectX) according to the instructions given in this file
- you have run the game according to the instructions given in this file
- you have checked the 'FAQ and Troubleshooting' section above for a possible solution to the problem
- you have written down the precise details of the problem, along with any error messages that the program may have reported
- you have the details of your machine's specification to hand.

In the unlikely event that Biosys refuses to work, the best way to submit a problem to Technical Support is via email. The email addresses are:-

tech.support@take2europe.com
take2@startekeurope.com

or you can contact our Technical Support Team at

Take2 Interactive Technical Support
Unit A, Sovereign Park
Brenda Road
Hartlepool
TS25 1NN

Telephone +44 (0)1429 855046 (Weekdays, 9:30am - 5:00 GMT)
Fax +44 (0)1429 233677

We will need to know as much about your equipment configuration as possible, so be prepared. And if you write, don't forget to include your name, address and telephone number.

OBTAINING GAMEPLAY HELP - HINTLINE INFORMATION

Do not contact Take2's technical support staff in search of game hints! They are neither permitted nor qualified to supply such information

For game play strategies and hints call: 0891 303344

Calls cost 50p per minute at all times. Please ask bill payer's permission.

SCREEN GRABS

You can grab the screen at any time by hitting the F7 key. Doing so the first time will create a file called

scrn0000.bmp

in the directory where the program (Biosys.exe) lives. Subsequent grabs will be saved to scrn0001.bmp, scrn0002.bmp and so on.

Please note that the copyright on all screen-grabbed images from Biosys belongs to Jumpstart Productions Ltd. The ability to grab the screen is provided for your own personal use only; for example you can set one of the images to be the background image of your computer's desktop. You must not attempt to commercially exploit the images, and you must not attempt to disguise or misrepresent their origin.

Please also note that grabbing the screen is an unsupported feature, meaning that technical support is not available for dealing with problems associated with its use.

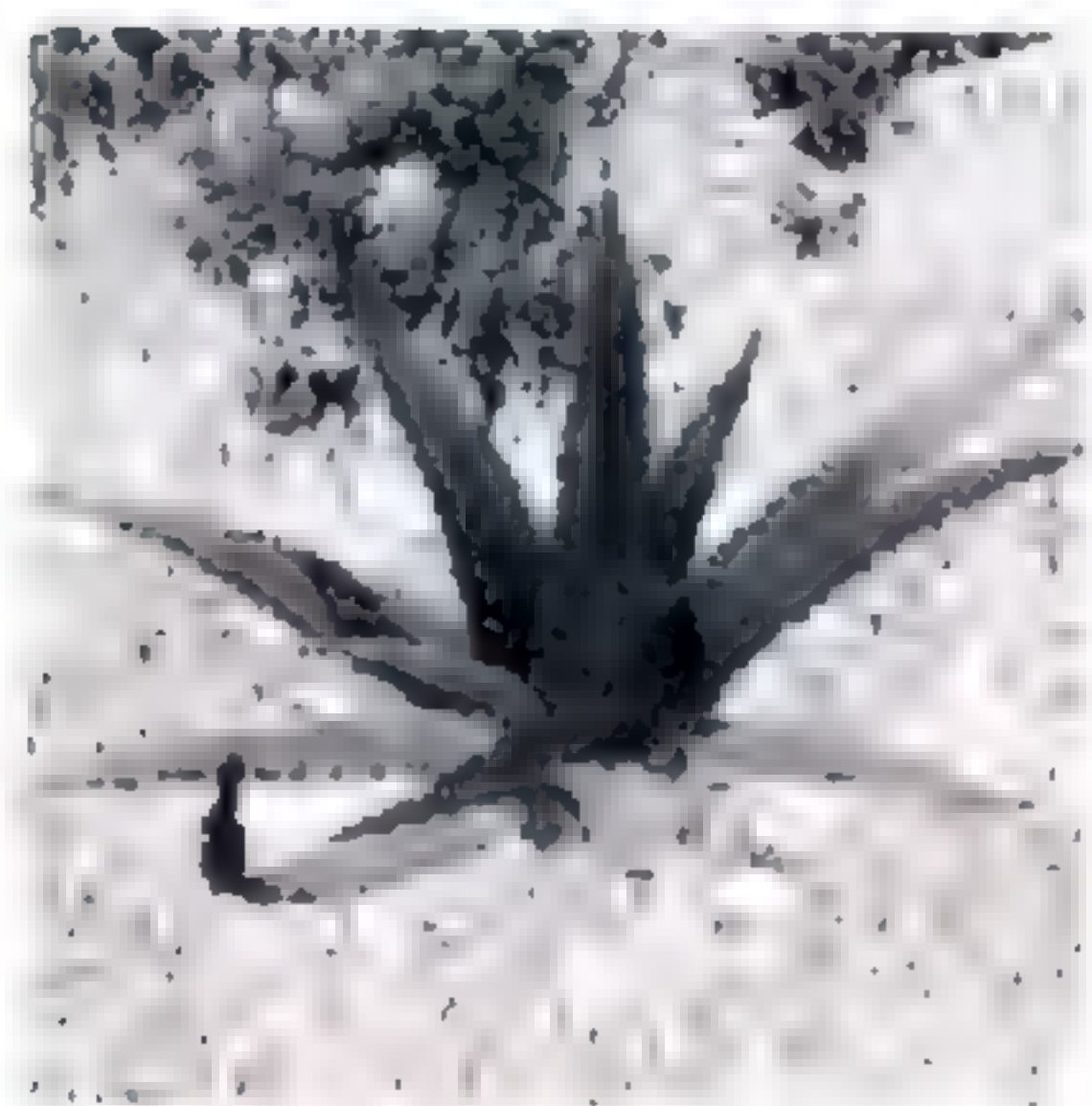


AGAVE

The spine-tipped sword shaped leaves of this cactus like plant have grown to 2m long. Edible buds grow at the base of the flower stalk.

Both the Aztecs and the Mayas used the plant for food and other purposes. Fermented Agave juice is used to make mescal.

The plant is very tolerant of drought and high temperatures and can withstand brief frosts, but the buds only grow during the wet season.



ALOE

This is a spiky looking succulent plant with thick tapering leaves reaching 45cm long. These leaves contain a clear gel that is an effective healer of burns, a common hazard in the environments.

Widespread in tropical and subtropical regions, the plant survives most desert conditions, being tolerant of both drought and high temperatures.



ALMOND

The kernel from the nut of this tree is a very useful source of protein.

The plant flowers in the wet summer season upon which the nuts will begin to appear. Once picked, they are slow to regrow.



BAOBAB TREE

These large trees with their thick succulent trunks have survived well on the eastern perimeter of the Savannah. The trunk of one has been hollowed out and can be used as storage for equipment and as a good place to camp.

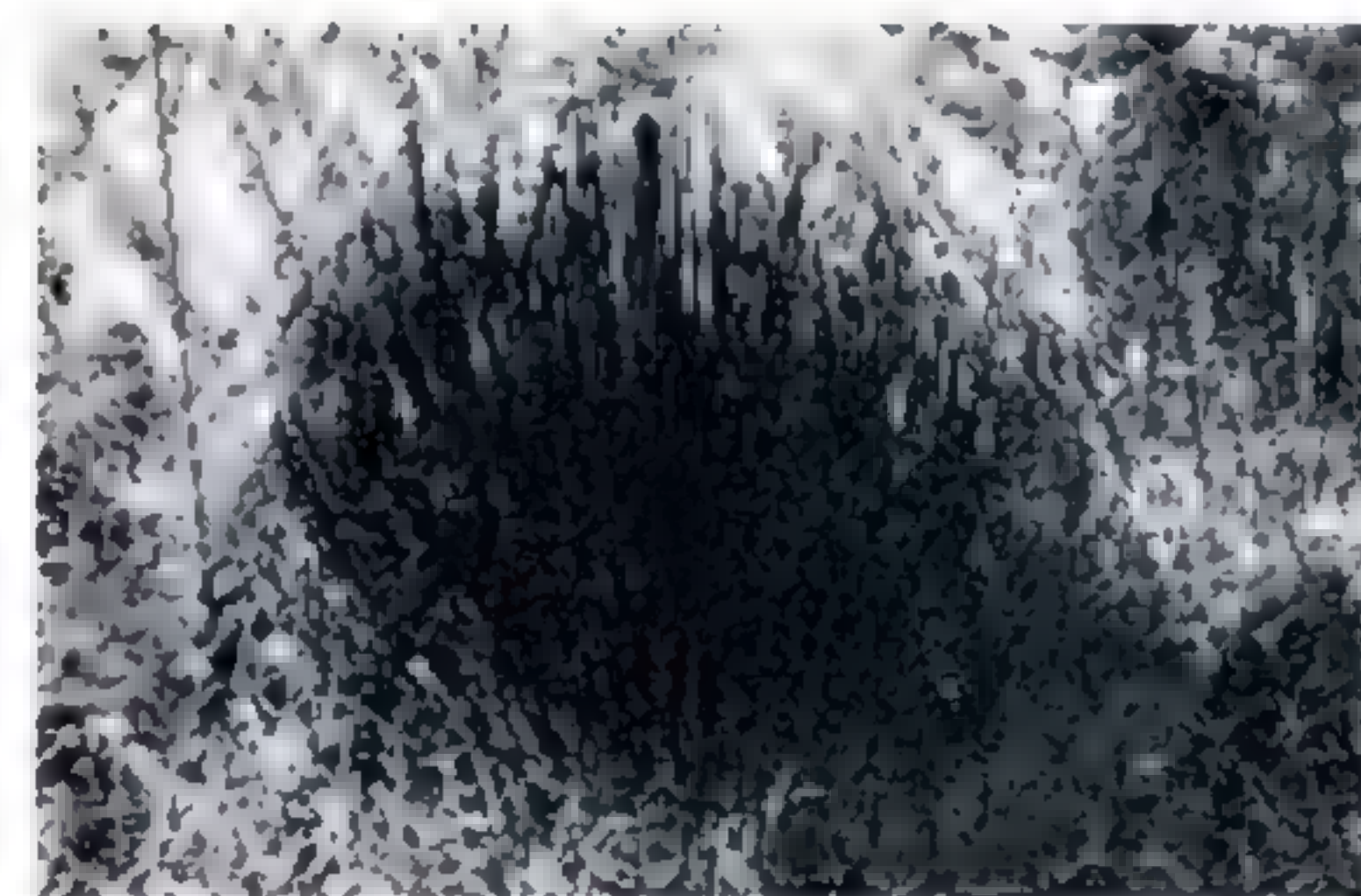
The tree loses its leaves in the dry season but, despite its appearance, will survive the driest of conditions thriving in full sunshine and warmth. It does not like continuous rainfall and temperatures any lower than 16°C.



BARREL CACTUS

These 2' high spiny barrels grow in the desert area. They thrive in the poor, sharply drained soil and extremely hot, sunny conditions that frequently prevail in this region. They have survived the most prolonged drought that this biome has been subjected to.

As a last resort, their thick bitter pulp may be extracted and drunk to help stave off dehydration, a common problem in the desert. These species rarely become adversely affected by low temperatures, but may rot if rainfall is too great or the wet season too prolonged.



EPHEDRA

This very small, innocent looking herb is actually a strong stimulant. It grows in the rougher areas of the Savannah. It can only be consumed once cooked in the thermal processor. In smaller doses its ephedrine qualities can help cure respiratory damage that may be suffered as a result of pollutants in the atmosphere.

It is anticipated that lung damage caused by the synth attacks could be cured in a similar fashion. In large enough doses it can mimic the action of adrenaline. However, its side-effects include insomnia and tremors. Blood pressure will rise considerably when under its influence.



FIGS

The fig trees will grow in the poorest of environments and their sweet, quick growing fruit can sustain survival throughout some of the leanest times in the biosphere.

Only the coldest of temperatures result in the fruit suffering from frost damage but the plants are extremely hardy and are capable of surviving the worst of conditions.



HEDGEHOG CACTUS

This highly toxic cactus grows in the desert. It requires well drained soil and will die if waterlogging occurs.

The American Indians have called this species "Tjeenayookisih", meaning "twist the heart", in reference to the kind of poisoning its extracted pulp induces. Its spines make excellent ammunition for hunting.

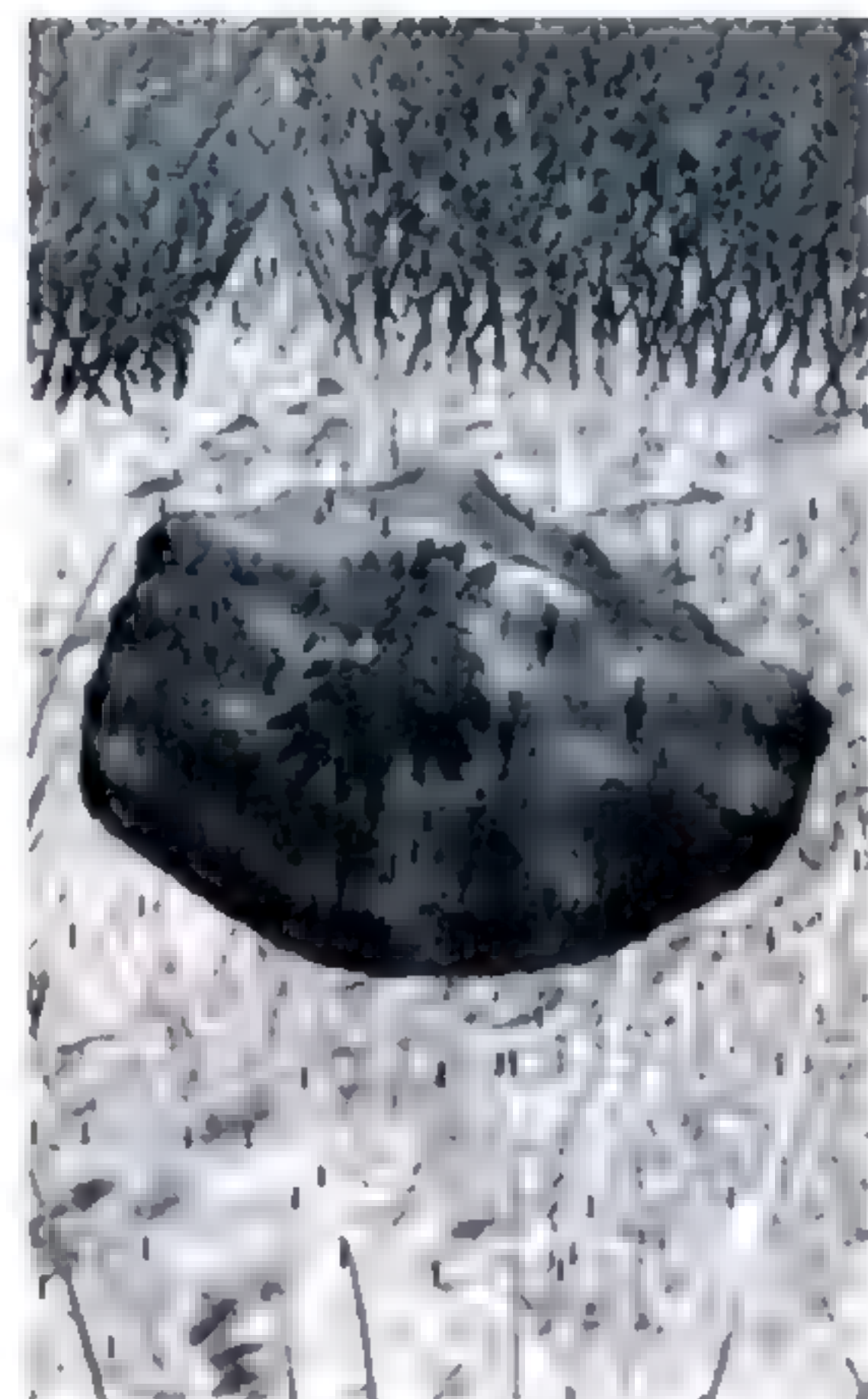


OKRA

This bush with long stalks and lobed leaves has grown up to 2.5m high.

The immature pods which are unripe and tender may be eaten. They are easily digestible and are a good source of nutrition.

The survival of the plant is dependant on warm and wet conditions and is unlikely to die in the cold winter.



PEYOTE

This is a tiny, squat cactus that grows in the desert; tiny but extremely dangerous.

It has gained its reputation as a source of mescaline, the potent hallucinogen. The Native Americans have used it as a shamanistic plant in religious ceremonies for over 3000 years as an aid to deepening their spiritual understanding. Its consumption may result in frightening visions and nausea.

As with most cactii it requires well drained soil and full sunshine.



PRICKLY PEAR

The prickly pear has proven to be amongst the hardest species of cacti growing on the sharply drained, gritty soils of the desert biome. Its spread form is almost tree like and it grows up to 3 metres tall.

Its vivid red fruit, which can grow in dry conditions, is extremely nutritious and is an excellent source of vitamin C.



SAGUARO

These columnar cacti have reached up to 9 metres high and have thrived well in the biosphere given their rarity in the outside world. They are very drought tolerant and prefer well drained soil.

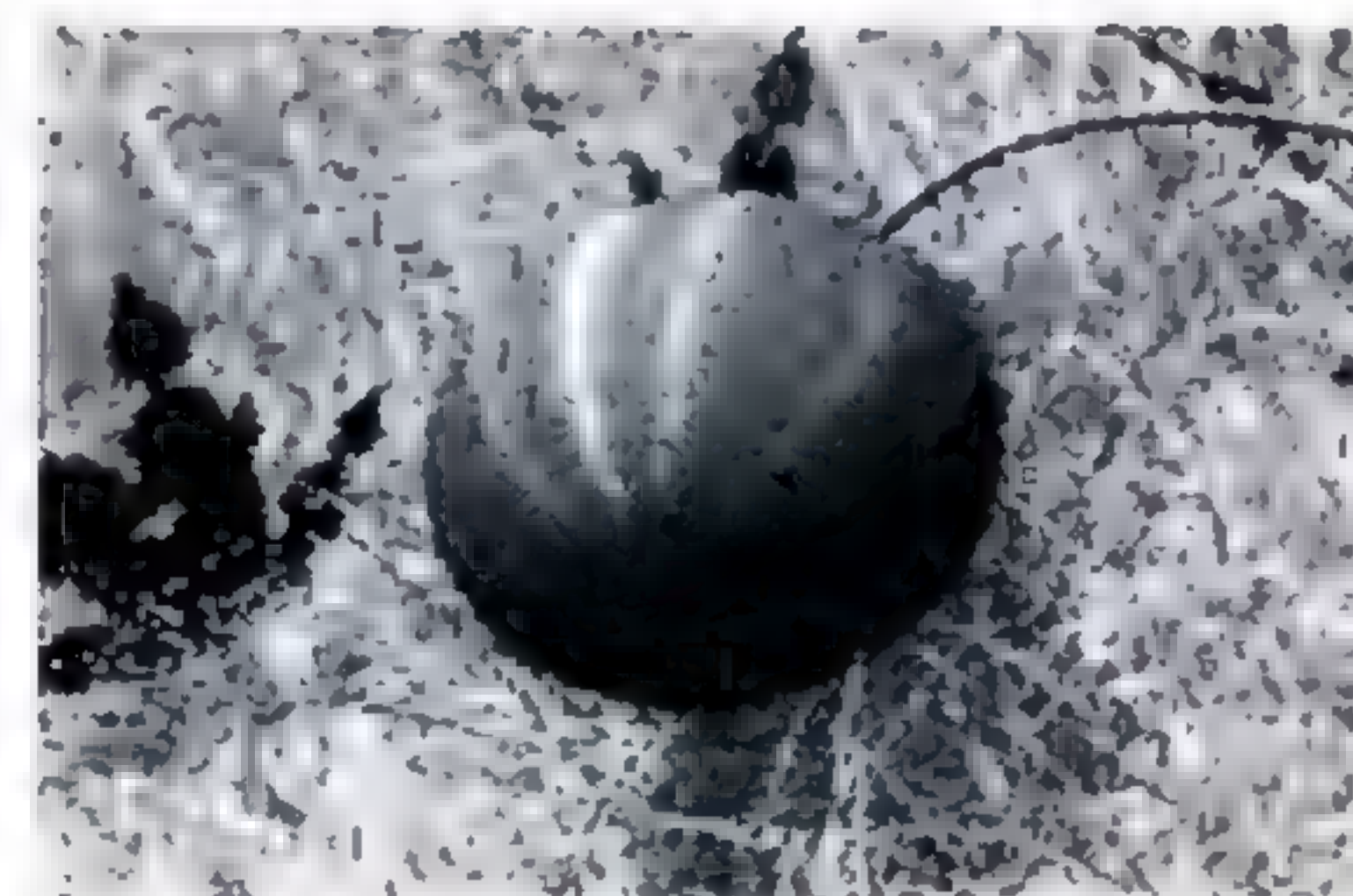
They bear large, delicious fruits which grow at their high tips; requiring the fruit picker for harvesting.



SQUAW CABBAGE

Commonly called "desert candles", these grow well on sharply drained gritty soil in dry, hot conditions.

When young, the stems of these are sweet tasting and can be eaten raw.



WATERMELON

The translucent red pulp from these fruits is an excellent source of water and vitamins. However, it takes a long time to ripen.

The plant grows on fertile sandy soils and thrives best when it is hot and there is abundant sunshine. It is fairly drought resistant but waterlogging will result in its death.



ANNATO

The evergreen *Bixa Orellana* is a source of annatto, an orange-red dye from the arils of the seeds, which is used to colour cheese, butter and soups. In the Amazon regions, the general use of the orange or red dye is that of a body paint. The Sionas and Secoyas colour fabrics and weapons with the dye.

More usefully, the dye is an antidote to prussic acid poisoning caused by eating raw manioc.



AVOCADO

The name of this dome shaped evergreen tree is derived from the Aztec word "ahuacatl" meaning testicle tree. It grows up to 20m tall and bears a buttery fruit whose flesh has a nutty taste and an exceptionally high fat content.

The tree is relatively tolerant of cold but prolonged exposure to temperatures below 1°C will result in severe stress. It requires well drained soil and is totally intolerant of waterlogging.



BANANA

This herbaceous perennial reaches up to 5-9m in height. They grow throughout the rainforest, and the fruit is the most reliable source of starch available and the most appreciated sweetener. Eating regularly helps maintain a good, balanced diet.

The plant prefers warm and damp conditions provided by high relative humidity, which will enable fruit to grow relatively quickly.

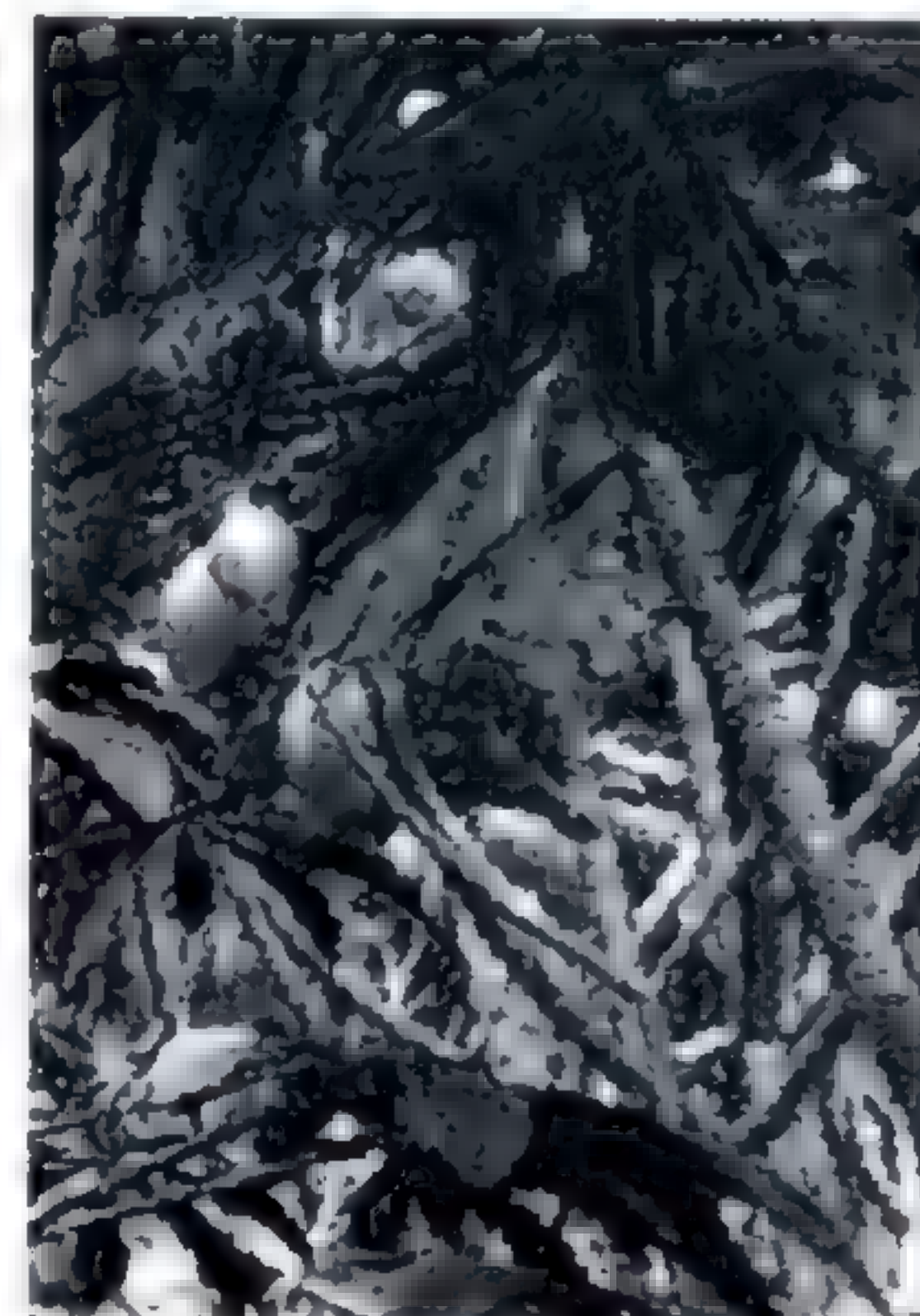


BRAZIL NUT

A 30-40m high tree with 10-30cm diameter globular capsules, closed at one end with a woody plug. The heavy capsules contain 15-30 brazil nuts in hard, wrinkled shells; a portion of which is extremely nutritious and ideal for maintaining a good diet.

The capsules occasionally fall from the tree and have to be broken open to obtain the nuts inside.

The tree grows in a warm, damp area of the forest on higher, firmer ground that is not prone to waterlogging.



BREADFRUIT

A 15-20m tree that forms multiple fruits with a warty surface, 20-30cm in diameter and weighing up to 2kg. A single tree can produce about 50 fruits which are a valuable source of carbohydrate.

The tree thrives on moist soils in damp and hot conditions with exposure to full sunshine. Dry conditions may cause the tree to shed its leaves, whilst waterlogging will affect fruit growth.

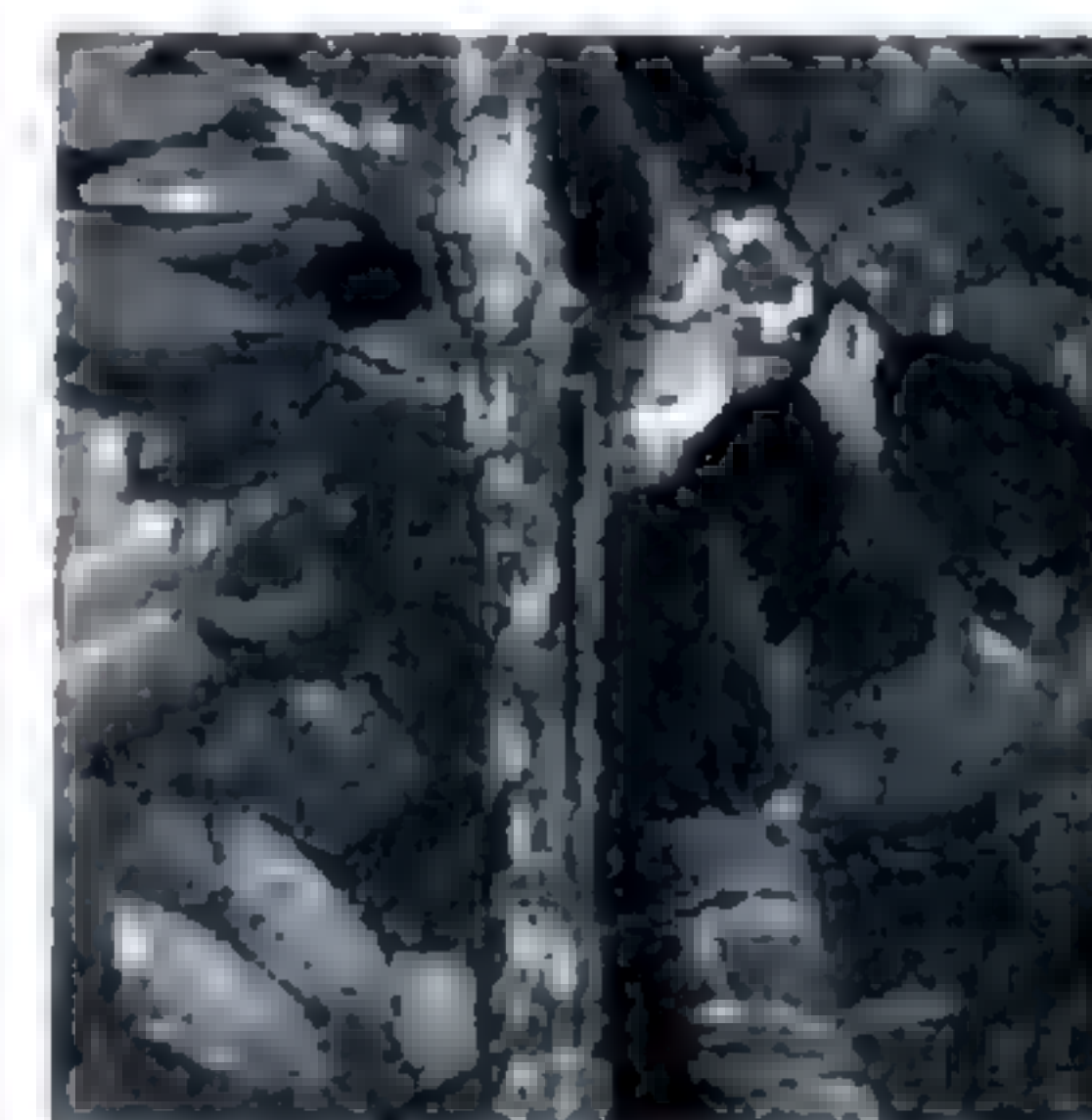


BROMELIADS

These air plants (plants which lodge their seeds in crevices and cracks in trees and grow there) are a form of epiphyte which have evolved into "water tanks".

Bromeliads, which are related to pineapples, have spiky leaves which channel water into the centre of the plant, which may hold as much as 10 litres.

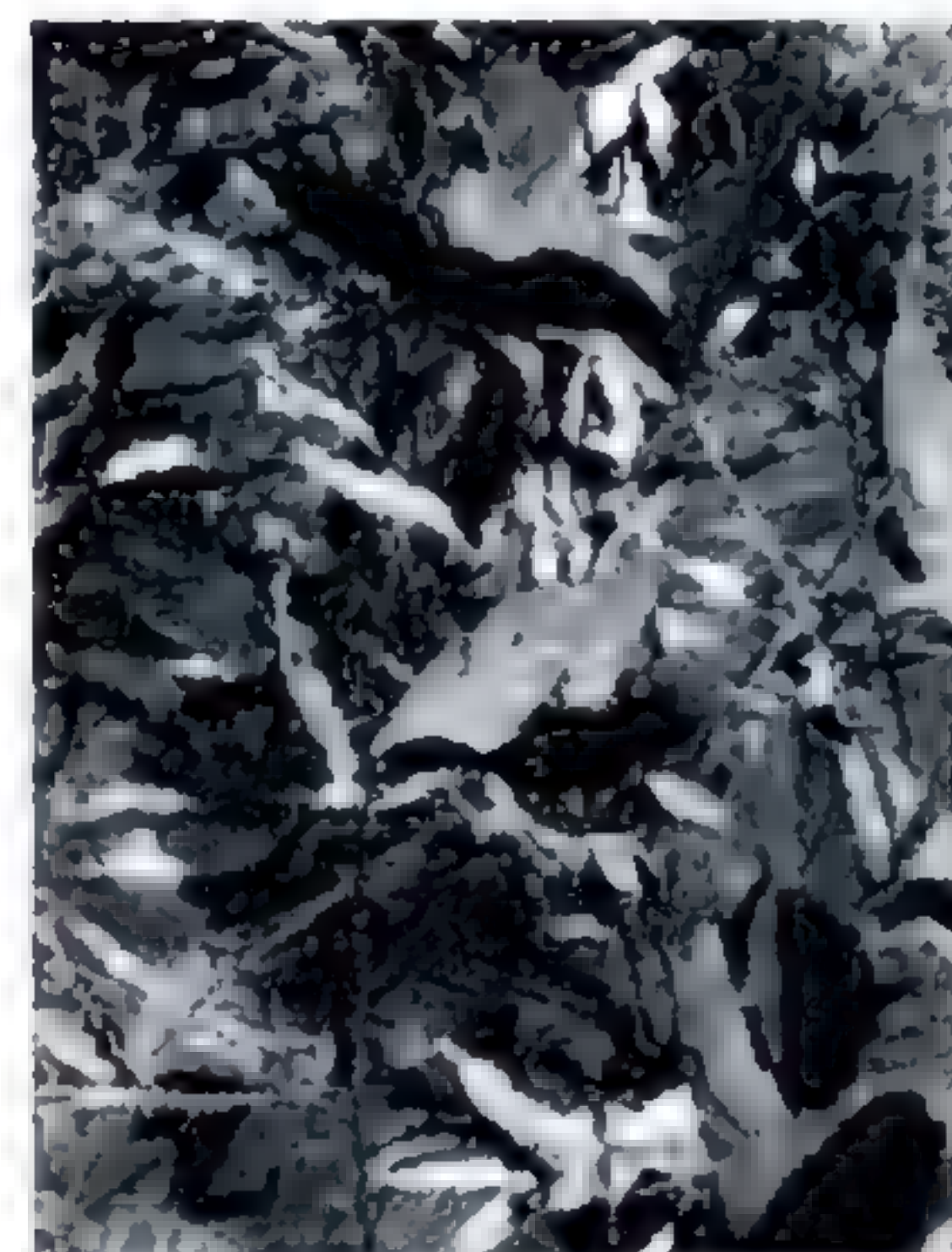
Unfortunately, they are also a potential breeding ground for mosquitos and other insects and drinking this water may result in a parasitic illness.



CINCHONA

The bark of the cinchona contains quinine, which counteracts malaria. The disease is caused by Plasmodium parasites transmitted in the saliva of female Anopheles mosquitos which proliferate in flooded areas. The liver becomes infested and causes fever. A blood test can be performed to identify the symptoms.

Slivers of the bark must be removed and consumed. This can eliminate the symptoms and revokes the health loss caused by malaria, preventing further recurrence.



COCA

Coca leaves are chewed as a daily stimulant by the people of the Andes. They contain an alkaloid stimulant which raises heart rate and blood pressure. The Tukanoan Indians, however, use it in a more processed and potent form and hold it as a sacred psychoactive plant.

Coca is a more powerful stimulant than guarana. The quick growing leaves are used to boost energy on

long hunting trips, rather than as a recreational narcotic. The stimulant affords increased capacity for performance and endurance and also, significantly, suppresses hunger pangs.



DA-BO-CAR

One of the hazards encountered in the rainforest is being bitten by a poisonous spider.

The Waorani Indians use the juice of *Solanum Sessiflorum* to prevent vomiting and generally counteract symptoms of poisoning following such bites.



GUARANA

A woody liana with small red seed capsules that have the highest caffeine content of all known plants.

The seeds can be chewed directly, artificially increasing energy and temporarily staving off the need to sleep.

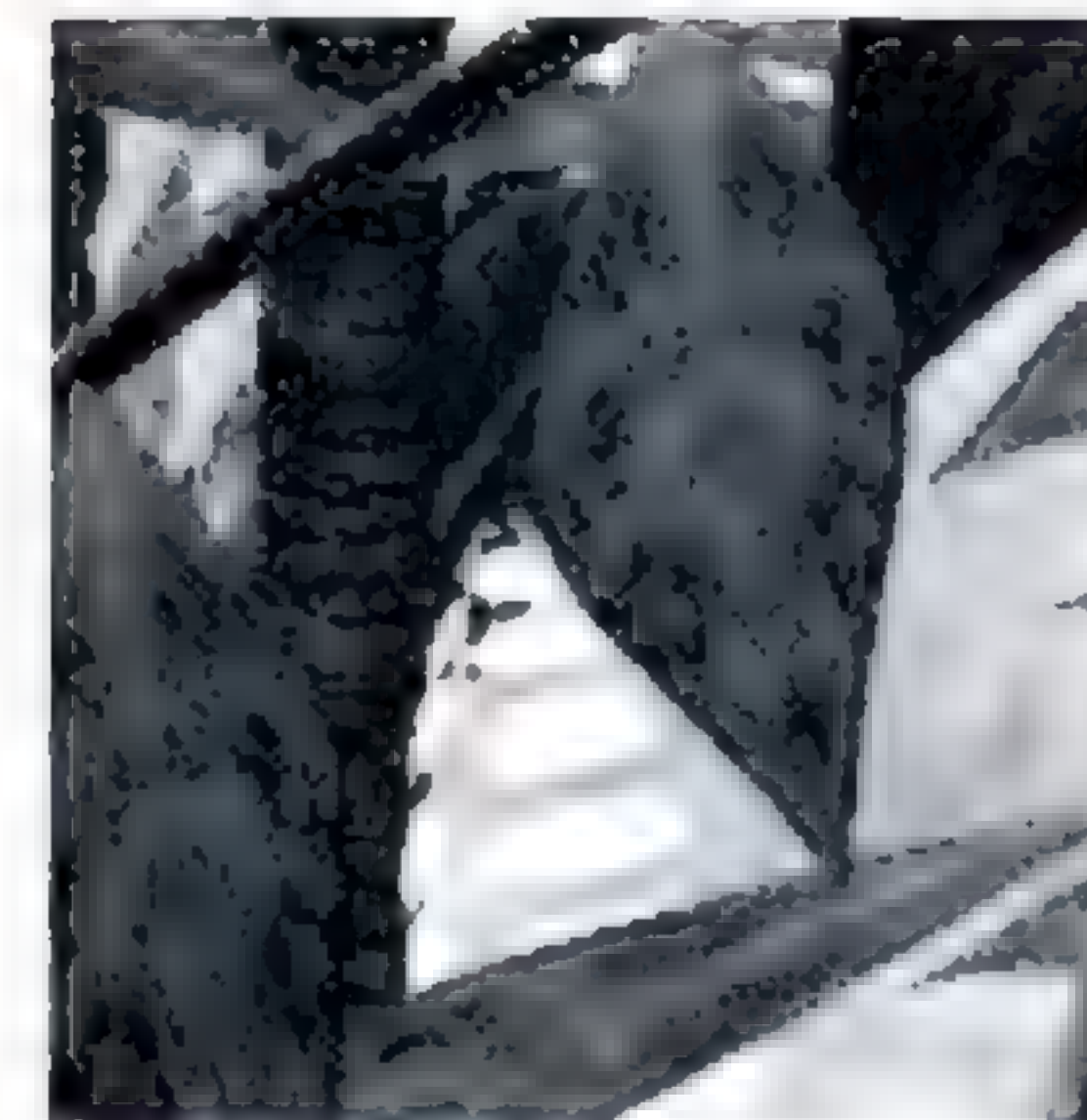
The effects of the seeds last for approximately 4 hours, and once its effects wear off tiredness quickly sets in.



HOGWEED

Contact with this plant can result in severe stinging of the hand that will need to be soothed by the use of aloe vera leaves. If not cured in such a way, Use of the hand may become impaired.

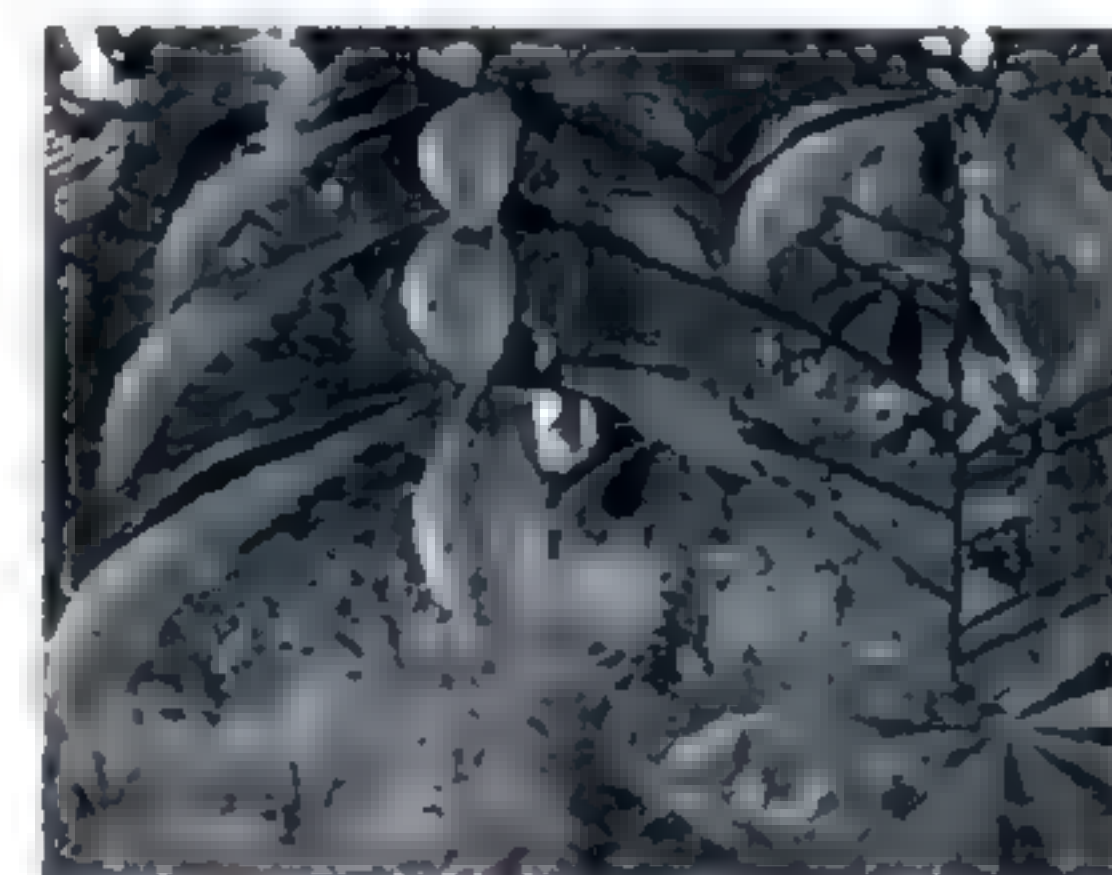
It is an extremely hardy nuisance and when encountered should be hacked down.



LOMBRIGUERA

The milky latex of this plant, although somewhat caustic, is widely recognised as a remedy for intestinal parasitism that can be contracted if water is drunk from an impure source. If suffering from such poisoning, blood tests will show up the presence of worms in the gut.

The latex can be extracted using the syringe and then consumed to cure the problem.

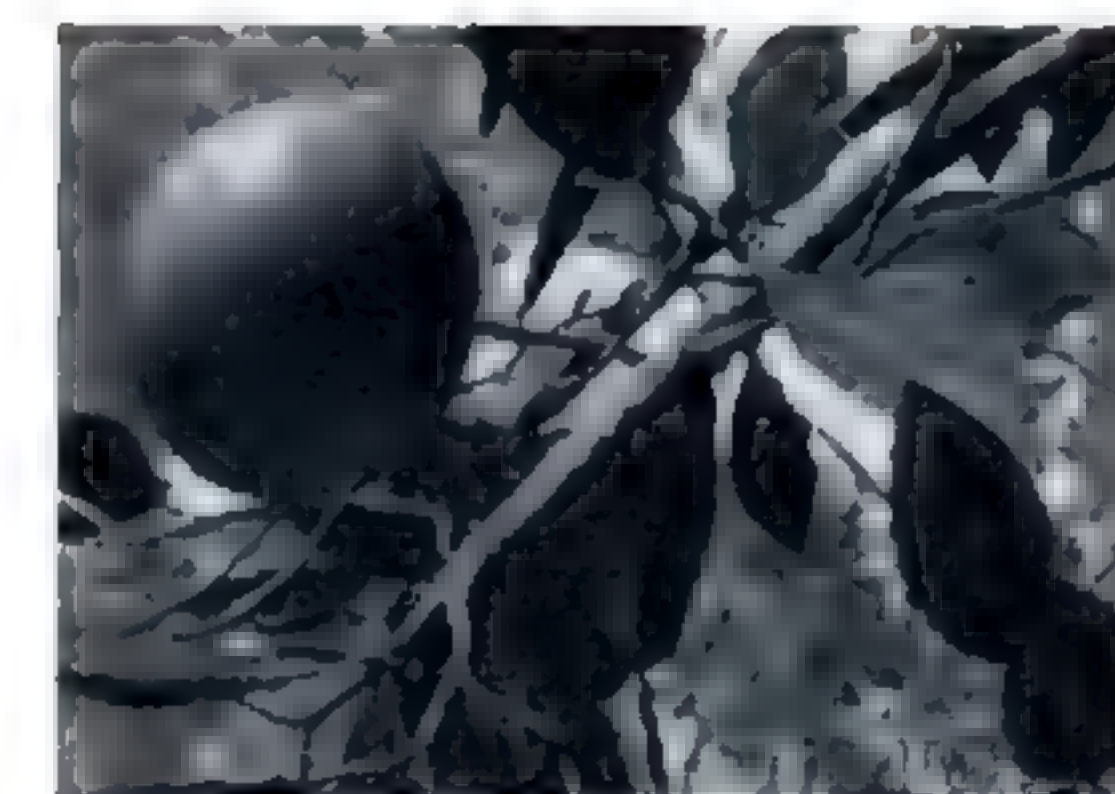


MANIOC

The manioc is also known as Cassava or Tapioca. The plant needs a lot of light but only makes moderate demands on the soil. However, it cannot tolerate prolonged drought or waterlogging. Its root tubers are rich in carbohydrate but relatively poor in

protein. Its milky sap, however, contains the poisonous cyanogenetic glycoside linamarin. Prussic acid is released from this by an enzyme present in the cell-tissue. Boiling in the thermal processor is sufficient to destroy the dangerous linamin and make it edible.

Effects of food poisoning may be counteracted with the annatto juice from *Bixa Orellana*.



ORANGE TREE

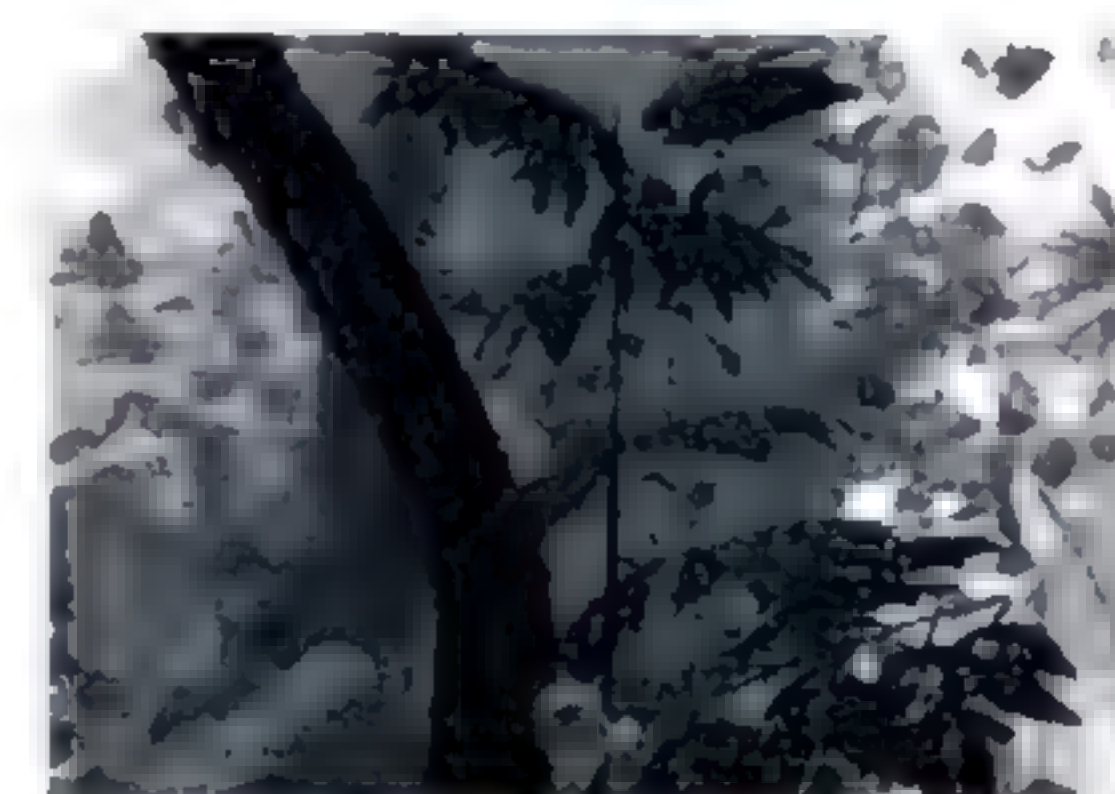
This tree grows in areas exposed to sunshine and bears a juicy, golden coloured fruit.



PAPAYA

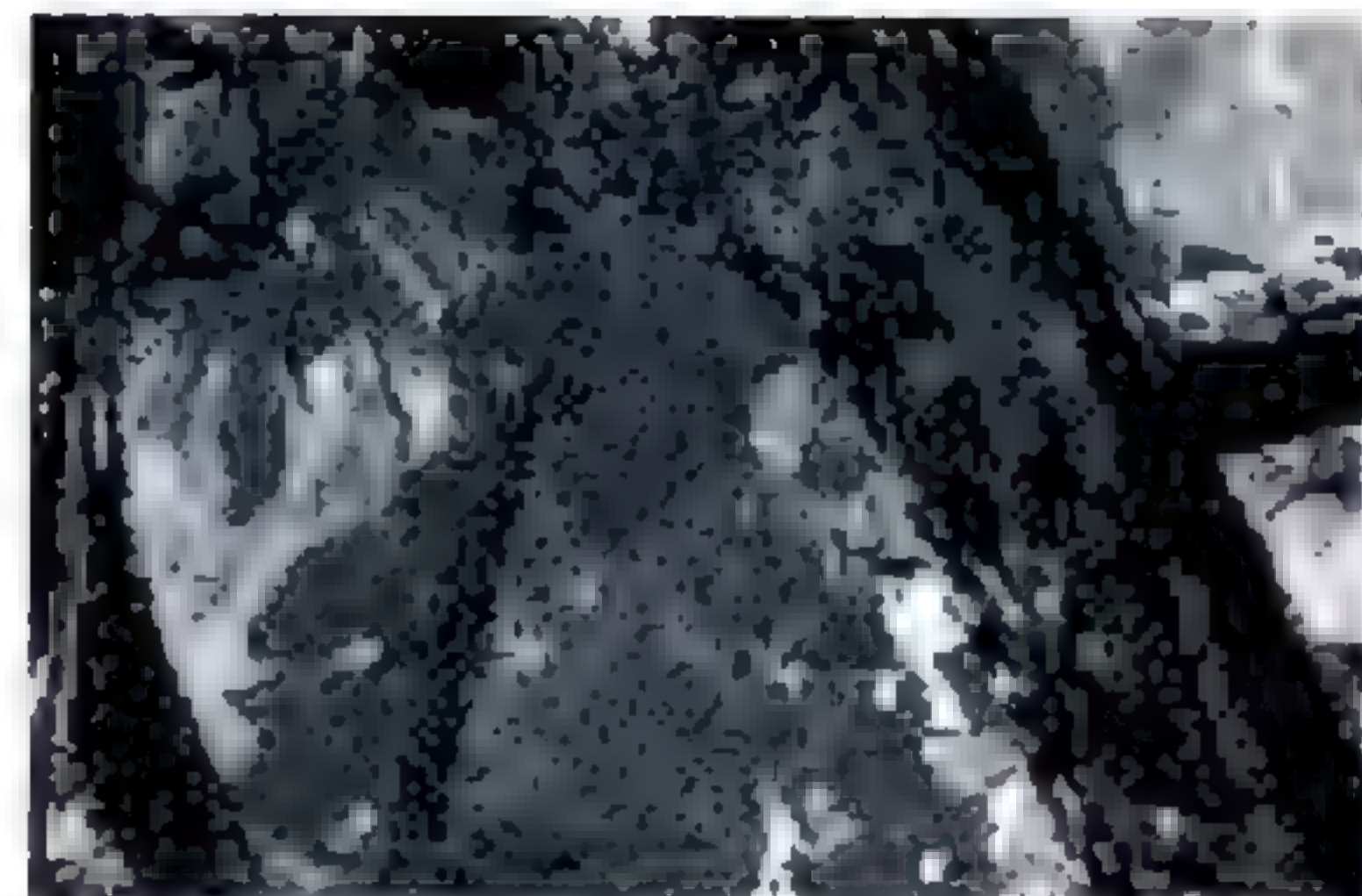
This is a short-lived tree growing up to 6m high, whose succulent fruits are produced the whole year round after pollination by insects.

It thrives in many areas of the rainforest, preferring exposure to full sunshine and high relative humidity. However, it is totally intolerant of waterlogging for any period



STRYCHNOS NUXVOMICA

The fruit from this plant contains traces of strychnine which will cause nausea and vomiting, although no long term health effects.



WATER LIANAS

A conspicuous feature of rainforests is the vast number of plants seen growing, hanging and dangling from the trees. These are referred to as climbers and epiphytes.

These epiphytes may be woody such as the lianas which use other plants for physical support and constitute an important floristic, structural and functional component of the rainforest. They are very light demanding and are found in the canopy and on the forest edges.

The liana can be cut open to obtain the pure rain water contained within.



WHITE ANGEL'S TRUMPET

A beautiful but potentially terrifying hallucinogenic plant with long, white, funereal flowers reminiscent of lilies. The juice of the leaves and flowers can be directly ingested. Consumption induces the loss of senses, visual disturbances and drying of the throat and mouth.

The Kofan Indians say that use of Brugmansia Aurea "gives visions of the future and permits you to hear the words you have spoken to people."

It grows in the area exposed to full sunshine near the top of the lake.



WILD YAM

The variety of yam growing in the rainforest produces only one tuber per plant, growing from the base of the stem.

Once grown, the tuber can survive in the ground for long periods without being harmed and can therefore be harvested at any time. It is similar in nutritional content to the potato.

This species is generally unpalatable and contains the poisonous alkaloid dioscorin, which must be removed by boiling in the thermal processor to avoid dioscorin poisoning, for which there is no cure.



COCONUT

A salt-tolerant tropical coastal plant, that prefers warm and damp conditions without temperature variations.

Coconuts occasionally fall to the ground but the fruit picker is normally required to gather them. The fruit contains a kernel; the hairy hard-shelled part that we think of as coconut. This contains highly nutritious flesh and milk, the latter an excellent substitute for water.

Production, Direction and Concepts

Producer	Aaron Witkin
Director	Simon Redman
Associate Producer	Mick Overall
Game Concepts	Simon Redman Chris Short Andrew Webb
Game Design	Tancred Dyke-Wells Simon Redman Rob Agar

Programming

Lead Programmer	Andrew Webb
Game & Simulation	
Programmer	Rob Agar
3D Distortion	Mat Cook
L-Systems Species	
Programming	Rob Agar
Set-up Program	Jiri Kantor

3-D

3D Artists	Susan Tilleray Stuart Hall Muriel Verliefde Haslina Dasley Tancred Dyke-Wells
Additional 3D Artwork	Claude Vuille Alexander Knox David Apikien Peter Laville Sebastian Witkin
3D Technical Support	Alexander Knox

2-D

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2D Animation	
& Special Effects	Alon Ziv
Graphic Design	Simon Redman Jon Brierley Richard Wilding Timothy Bird
2D Artwork	Lubo Christov Richard Johnson
Visualisation	

Sound

Original Music	
& Sound Design	The Insects
Sound Effects	Tancred Dyke-Wells Ben Jones at Soundbyte

Authoring

Game Authoring	Tancred Dyke-Wells Richard Wilding Jon Brierley Richard Wilding Richard Johnson Richard Wilding
Image Processing	
Asset Management	

Research

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Ecological research	Dan Sonnenberg Jo Readman Keith Moore
Architectural research	Graham Moore TBV Consult

Script

Storyline	Chris Short Simon Redman Tancred Dyke-Wells
Script Devised	
and Written by	Chris Short

Video

Digital Video Editing	Alon Ziv
Video Direction	Chris Short

Cast

Professor Alan Russell	Jacob Witkin
Sam Devlin	Mell Cobb
Mike Abell	John Ashton
Sarah Parish	Jo Baird
Alexei Bialystok	Stephen Tiller
Jenny	Heather McCall
Workman	Ray Burnside
Russell's Mother	Sharon Jackson
Voiceover	Graydon Gould

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From an original concept by Mike Wilks

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In memory of Touch Interactive and Touch Animation

Take 2 Team

Producer	Lucien King
Associate Producer	Dan Houser
Production Assistant	Ali Candy
Executive Producers	Sam Houser David Strempel Matt Gorman Paul Cuthill Mike Wenn Adam Rabin Charlie Johnstone Tim Le Tourneau
Marketing at International	
Test Team	
Test Manager	
Technical Manager	
for TAKE2	Gary J. Foreman

Many thanks to Gary Dale, Andrea Mills, Joanne Green, Wision, Theodore Goddard, Barry Lancaster-Smith, JP Rohan, Simon Downing, Mandy Shevlin, Tracey Mortimer, All at ONLINE MAGIC



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DO NOT CONTACT TAKE 2'S TECHNICAL SUPPORT STAFF IN SEARCH OF GAME HINTS.
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For game strategies in the United Kingdom call:

0891 30 33 44

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BIOSYS/MANUAL/E

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